NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

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MEMORANDUM

Subject: Findley Lake Internal Loading
Date: October 16, 2023
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DEC has been notified of concerns from Town of Mina residents regarding internal phosphorus loading in Findley Lake as it compares to loading from septic systems and other external sources. Internal loading was not explicitly quantified in the 2008 TMDL due to a lack of relevant data.

"Internal loading" describes the process of nutrient release from sediments in the lake bottom into the water column. Note that internal loading is inherently related to loading from external sources. As phosphorus inputs from watershed sources (septic systems or other sources) to the lake are decreased, the amount of phosphorus bound to the sediment will also decrease, causing internal loading to become less significant. This process will occur naturally over time as water moves through the lake system. It is possible that additional measures will need to be taken in the future to fully address internal loading. In order for any such projects to be effective and eligible for DEC funding, it is important that the external sources are addressed first. As such, the exact percentage of internal loading compared to loading from septic systems is not critical information at this time.

Please also note that significant sewering projects are being completed around Chautauqua Lake (i.e., the West Side Sewer Extension) to remove this phosphorus source despite internal loading being called out as a significant portion of the overall phosphorus load (25 to 55 percent of total) in the 2012 TMDL. These projects demonstrate the importance of addressing external phosphorus sources to meet TMDL goals and improve water quality.